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USAWC MILITARY STUDIES PROGRAM PAPER



PERSONAL MILITARY INVESTING: ENDS-MEANS-WAYS

An Individual Study Project
Intended for Publication

by

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money managers and investment advisors.

"Keepers of the Proprietary" (E.G.)

ABSTRACT

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This paper is intended to supply the military officer with the tools necessary to evaluate how much money he will need for any goal and a strategy of how to achieve those goals. This paper permits an officer to understand how to invest and how to evaluate investments. The paper is divided into three sections: Ends, establishing the amount of money the officer needs to have on hand to meet his goals. Means, a listing of investment tools and their definitions. Ways, strategies that make use of the tools to accomplish the goals. It also provides information on how to select and evaluate professional money managers and investment advisors.

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Introduction

As military officers we spend much time thinking about and studying our profession and so it should be, for no other profession protects our national security and with it our values and way of life. In our profession our actions or inaction can cost the lives of the nation's most valuable assets, its youth. So it is no wonder that so few of us take the time to think about our own financial futures. This paper will provide you with a way to estimate how much money you need to achieve your financial goals and will give you the tools necessary for success using the classic military strategy technique of ENDS, WAYS, and MEANS. Once you learn the tools and study the strategy, an investment of about four hours, you only need to spend another four hours a year evaluating.

The Joint Service definition of strategy is: "The art and science of employing the armed forces of a nation to secure the objectives of national policy by the application of force, or the threat of force."¹ Our strategic definition will be: The art and science of utilizing the investment tools available to secure our personal ends by the application of investment knowledge.

In studying military strategy we find it useful to divide strategy into ENDS (objectives towards which one strives), WAYS (courses of action to attain an END) and MEANS (instruments used in the courses of action).² In the

study of investment strategy we will use the same construct. However, this paper will discuss the MEANS before the WAYS in order to familiarize you with the tools of investment. After an explanation of the investment tools we will look at the various courses of action available to accomplish the ENDS.

I have picked two popular ENDS to discuss in this paper, i.e., college tuition and retirement. You may have others goals and the assessment tools should work equally well for them. These investment tools, MEANS, will be defined, analyzed, and evaluated for their applicability to each of the ENDS, then some WAYS to employ the means will be suggested. It is most important that you DO NOT skip the MEANS portion and go to the WAYS without understanding the risks of each type of investment. The suggested rules for evaluating the MEANS must be utilized in order to keep the investments on track. I firmly believe that if you spend the time to read this paper and follow the rules you can achieve your ENDS and spend less than four hours a year doing it. If you choose not to do your own work in picking or monitoring your investments be sure to read the WAYS section on choosing a financial advisor.

You must understand that none of these investment strategies are risk free. Each has risk of either capital loss (you may lose all or a portion of what you invest), inflationary loss (the investment may not keep up with the rising cost of the END or insufficiency), (the starting

amount of money may not be sufficient over the available time to create the END). So with the understanding that no one owns a crystal ball let us begin.

Section One

ENDS

Crafting Your Own Portfolio Six Steps to Estimating your Investment Requirements

The first step in any financial planning is to set your goal and then estimate how much money you need to get there. The following six steps can be used to estimate how much money you need for almost any goal. I will be using these steps in the examples throughout this paper so do not worry if the steps seem hard to understand at first.

These steps and tables were modeled after the article "Creating your own Portfolio" in the October 1985 issue of MONEY magazine. I have modified the tables slightly. 3
Step One - Calculate the amount of money needed for any single objective. We will use the table below which assumes that you earn 10% on your investment.

Years cash flow is required	Factors
4	3.49
5	4.17
10	6.76
20	9.36
25	9.98
30	10.37

Step Two - Calculating the amount of money after adjusting for inflation (assuming 5%)

Inflation is likely to be with us for the foreseeable future. Therefore, you must calculate the effect of inflation

on the amount of money you will need for any goal. Step two shows you how to do that assuming a 5% inflation rate.

Years until money is required	Factors
4	.95
5	1.28
10	1.63
15	2.08
20	2.65
25	3.39
30	4.32

Step Three - Find the current value of your saving and investments earmarked for the objective. (Saving accounts, mutual funds, etc.)

You may have some savings set aside already for your goal so you should list it now.

Step Four - Calculate what your investment IN STEP 3 will be worth when you need it. To do this you should estimate when you will need the money. The table below will be used. The investment options have been divided into three columns. These columns allow you to choose how much risk you want to take.

Years until money is required	Investment options		
	10% low risk	15% medium risk	20% high risk
4	1.40	1.85	1.35
5	1.61	2.01	2.49
10	2.60	4.05	6.19
20	6.73	16.37	38.34
25	10.83	32.92	95.40
30	17.45	66.21	237.38

Step Five -Subtract what you have from what you need

Step Six -Calculate the amount of money you must put away each month to reach the amount in step five.

Finally you need to calculate the amount of money that you must save and invest each month to reach your goal. To do this you must estimate when the money is required, choose an investment option in keeping with your risk exposure, and then multiply the amount in step five by the appropriate factor in the table below.

Years until money is required	Investment options		
	10%	15%	20%
4			
5	.013	.011	.010
10	.005	.004	.003
15	.002	.001	.0009
20	.001	.0007	.0003
25	.0008	.0003	.0001
30	.0004	.0001	.00004

These steps can be used for any investment goal or END be it college education, home buying, or retirement. I recommend that you perform these calculations once a year when you evaluate your portfolio. These calculations will provide a good benchmark on your progress. Let us try and use these steps to estimate how much money will be needed to provide a college education for our children.

COLLEGE

Today the average public university costs about \$5,000.00 per child per year with the average private one costing \$13,000 per year. This includes the basics such as tuition, room and board, clothes, trips home etc. Thus a four year college degree may cost between \$20k and \$30k in

a public university and from \$46k to \$55k at a private one. In the future it will cost more. Using Table One you can calculate the amount you will have to pay depending on the age of your children. (I also found figures of \$5800 for public on campus to \$12,000 for private on campus so your current experience or those of friends can be substituted for the Table One figures if you wish.) This table was derived from a publication by the investment firm of Edwards Jones & Co. I have updated the numbers from various sources.

TABLE ONE

Child's Age	15	14	13	12	11	10	9	8
\$ thousands								
Public	23.2	24.5	26	27.5	29.2	31	32.8	34.8
Private	59	62.5	66.3	70.3	74.5	79	83.7	88.7
Age								
\$ thousands								
Public	36.9	39.1	41.4	43.9	46.6			
Private	94	99.7	105	112	118.7			

Shell shocked? Well if it is any consolation the value of the degree to your child is well worth it. According to the U.S. Bureau of the Census the average worker with a high school education will earn \$803,000 between the ages of 25 and 64 while the average college graduate will earn \$1,165,000. Of course, monetary rewards are only a portion of the advantages of the college experience.

You may not plan on paying the complete college bill out of your current income. In fact, you may only plan

to pay for a portion of the total leaving some to be paid for by the child, through loans, work scholarships or grants. The College scholarship service estimates that for a family income of \$48,000 pre-tax, parents should contribute \$ 9,200 or 19% of the bill, while the family with an income of \$60k should contribute \$12,628 or 21%. These are the approximate yearly salaries of a LTC and Col in today's dollars. The amount over these figures may be provided by college scholarships, state scholarships, professional scholarships, guaranteed student loans and work study programs. In figuring your total END amount you must determine what aid is available based on the figures above, your child's academic abilities and your own desires. Table One gives a total END and you should be able to calculate how much you want to contribute to that END. Using the procedure described below you can estimate how much money you will need to get to any END. As an example, let us use the six step method to estimate how much money we must save and invest each month to pay for college expenses.

College Example

I have picked an average family to illustrate the use of our six steps to estimating how much we have to save and invest in order to send our children to school. For this example, let us assume Fred's child is currently eight years old and will be attending college in ten years. The amount required, from Table One, will be (rounded up) 35k dollars

to 89k dollars for four years.

Step One - Calculate the amount of money needed for any single objective.

From table one the amount of money required in school year 2000 is 35k for public college and 89k for private college. The annual amount would be one fourth per year or 8,750 and 22,250. This assumes that it takes the child 4 years to finish college.

Fred must first estimate the amount he will need at the beginning of any investment period in order to provide a cash flow over several years. He begins by estimating the number of years he will need the cash flow, i.e., four for an average college education. Then determining the factor in the table in step one that corresponds to four years he multiplies that factor by the yearly required figure. In our example he multiples the \$8,750 by the factor of 3.49. After performing these calculations, Fred sees that he needs \$30,537 for a public school and \$77,652 for a private one at year one. The additional \$4,463 or \$11,348 will be obtained through investment returns. Fred has made the decision that his children will go to a public in state school.

Years cash flow is required	Factors
4	<u>3.49</u>
5	4.17
10	6.76
20	9.36
25	9.98
30	10.37
\$8,750 X 3.49 = \$30,537	

Step Two - Calculating the amount of money after adjusting for inflation. Step two shows Fred how to do that assuming a 5% inflation rate. Our example assumes the child is 8 years old and it will be 10 yrs before the money is needed. Therefore, we multiply the amount needed at year one, \$30,537, by a factor of 1.63 (inflation over 10 years)

Years until money is required	Factors
4	.95
5	1.28
<u>10</u>	<u>1.63</u>
15	2.08
20	2.65
25	3.39
30	4.32
\$30,537 X 1.63 = \$49,775	

Fred needs \$49,775 to send his child to school.

Step Three - Find the current value of your saving and investments earmarked for the objective. (Saving accounts, mutual funds, etc.)

Fred may have some savings set aside already for his goal so he should list it now. Our example will assume he

has saved \$2,000.00

Step Four - Calculate what your investment will be worth when you need it. To do this you should estimate when you will need the money, (in our college example 10 years), select the investment option most suited to your risk exposure, (for this example Fred has selected the middle option of 15%), and then multiply the savings, \$2,000, by the appropriate factor, 4.05. At the medium risk level he will have \$8,100 to spend on college.

Years until money is required	Investment options		
	10% low risk	15% medium risk	20% high risk
4	1.40	1.85	1.35
5	1.61	2.01	2.49
10	2.60	4.05	6.19
20	6.73	16.37	38.34
25	10.83	32.92	95.40
30	17.45	66.21	237.38

$$2,000 \times 2.6 = 5,000 \text{ at low risk}$$

$$\underline{2,000 \times 4.05 = 8,100 \text{ at medium risk}}$$

$$\underline{\underline{2,000 \times 6.19 = 12,380 \text{ at high risk}}}$$

Step Five - Subtract what you have from what you need.

Now that Fred has calculated what his current savings of \$2,000 will be worth when he needs it, \$8,100, he only needs to subtract it from the required amount in step two to arrive at his target figure.

$$\$49,775 - \$8,100 = \$41,675$$

Step Six - Calculate the amount of money you must put away each month to reach your goal determined in step 5.

Finally you must calculate the amount of money that must be saved and invested each month to reach your goal. To

do this you must estimate when you will need the money, choose an investment option in keeping with your risk exposure, select the appropriate factor from the table below and then multiply the target figure by this factor. In our example, multiply the target figure of \$ 41,675 by the factor of .004 which is located under the 15% investment option along the 10 year line. For a public school, he will need to save and invest \$166 a month.

Years until money is required	Investment options		
	10%	15%	20%
4			
5	.013	.011	.010
10	.005	.004	.003
<u>15</u>	.002	.001	.0009
20	.001	.0007	.0003
25	.0008	.0003	.0001
30	.0004	.0001	.00004
\$41,675 X .004 = \$166 a month			

RETIREMENT

This END is harder to think about and plan for since it may be further away, less enjoyable to contemplate and perhaps somewhat frightening. Still we should know what we need and understand how to reach them.

For the service member there are commonly two phases in retirement. The first phase comes when he leaves the military. Since most service members will start another career in the civilian world, this is not true retirement. The second phase occurs when full time employment stops entirely. I will use the example of two military officers, Tom and Bill, to demonstrate how to estimate how much money each needs to save and invest to meet these goals. The first, Tom, retires from the military at age 40 after 20 years of active duty. The second, Bill, retires at age 50 after 30 years service. Both Tom and Bill wish to have an income equal to or greater, in each stage of retirement, to that of their current active duty income. I have assumed that each has been offered and accepted a civilian job that pays \$30,000 per year.

Retirement Example

Tom's current active duty pay is \$57,408. If he wishes to have an income equal to his active duty earnings he will need to have additional income of \$3,510 a year in addition to his \$30,000 second career salary. This figure is calculated in the following manner: Current pay is \$57,408 (Active duty pay plus BOQ and BAS), \$57,408 - \$23,898 (50% of your base pay) = \$33,510, \$33,510 - \$30,000 (Second job income) = \$3,510. Note, I have not

subtracted the set aside for SBP if you should elect to take this very fine program. I have also calculated everything in pretax dollars. After working in his second career for 25 years, Tom intends to retire completely and enjoy at least 20 more years. Thus Tom has to ensure that he has enough money to live comfortably from age 65 to age 85. This example assumes that both his military retirement income and the income from his second job will keep up with inflation. The first set of calculations show Tom the amount of income he needs to match his active duty income during his second career for a period of 20 years. Using the Six Step procedure the calculations look like this.

Step One - Calculate the amount of money needed for any single objective.

Tom wants \$3,510 additional income from investments for 25 years until second retirement. Tom will need \$35,029 at year one assuming a 10% return on his investment.

Years cash flow is required	Factor
4	3.49
5	4.17
10	6.76
20	9.36
25	9.98
<u>30</u>	<u>10.37</u>

$$3,510 \times 9.98 = 35,029$$

Step Two - Calculate the amount of money after adjusting for inflation. Tom will need \$118,751

Years till money is required	Factor
.]	.95
15	1.28
20	1.63
25	2.08
<u>30</u>	<u>2.65</u>
	<u>3.39</u>
	<u>4.32</u>

$$35,029 \times 3.39 = 118,751$$

Step Three - Find the current value of your savings for the objective. Let us assume Tom has done some planning and has assets worth \$2,000 that he intends to use to supplement his second career income.

\$2,000

Step Four - Calculate what your investment will be worth when you need it. Tom will have \$65,840 to meet his objective.

Years until money is required	Investment Options		
	10% Low risk	15% Medium risk	20% High risk
4	1.40	1.85	1.35
5	1.61	2.01	2.49
10	2.60	4.05	6.19
20	6.73	16.37	38.34
25	10.83	<u>32.92</u>	95.40
<u>30</u>	17.45	<u>66.21</u>	237.38

$$2,000 \times 32.92 = 65,840$$

Step Five - Subtract you have from what you need. Tom will need \$52,911.

$$118,751 - 65,840 = 52,911$$

Step Six - Calculate the amount of money that you must save and invest each month to reach your goal. If Tom has 5 years left till his retirement at age 40 and 20 years service he will need to save and invest \$582 a month. Of course, if Tom had started earlier, he could have saved and invested less each month. For example, if he had started 10 years ago, he

would have had to save and invest only \$211 a month.

Years until money is required	Investment Option		
	10% Low risk	15% Medium risk	20% High risk
5	.013	.011	.010
10	.005	.004	.003
15	.002	.001	.003
20	.001	.0007	.0003
25	.0008	.0003	.0001
30	.0004	.0001	.00004
	$52,911 \times .011 = 582$		

Now Tom wants to estimate how much he needs to save and invest during his second career to have a comfortable retirement at age 65. I have assumed that Tom will enjoy good health and live another 20 years to age 85. Tom still wants to match his original active duty pay. Active duty is \$57,408 (Active duty pay plus BOQ and BAS), \$57,408 - \$23,898 (50% of your base pay) = \$33,510. I have assumed that he will not receive any retirement from his second job and that he has not started any saving plan toward this end until he started his second job.

Step One - Tom requires the original \$33,510 for 20 years

$$33,510 \times 9.36 = 313,653$$

Step Two - Adjusting for inflation 25 years in the future

$$313,653 \times 3.39 = 1,063,285$$

Step Three - Amount of current savings toward this end

0

Step Four - Future value of current savings

0

Step Five - Net amount Tom will need \$1,063,285 - 0 = \$1,063,285

Step Six - Monthly saving and investment plan. Tom will need to save and invest \$310.98 a month for the 25 years following his

initial retirement from the service assuming a 15% return on his investment.

$$1,063,285 \times .0003 = 318.98$$

Now let us turn to Bill and use the same steps to estimate what he needs to save and invest. Remember Bill's goal is to match his active duty income after 30 years service. A Col at 30 years earns \$70,548(pay and allowances) -75% (base pay) \$45,468 = \$25,080. However, since Bill has chosen to enter a second career and the salary is \$30,000 he does not need any additional money during this retirement phase. (\$25,080 -30,000 = -\$4920)

Now Bill wants to calculate how much he will need to save and invest so he can enjoy the next 20 years, from age 65 to 85 without working. Using the same six steps let us follow Bill through the calculations.

Step One - Required yearly income of \$25,080 for 20 years.

Bill needs \$234,748

$$25,080 \times 9.36 = 234,748$$

Step Two - After inflation of 15 years Bill needs \$1,373,484.

$$234,748 \times 2.08 = 488,277$$

Step Three - How much Bill has put away for this end. Let us assume Bill has not saved any money at this time for this end.

0

Step Four - The future value of Bill's savings. You start with zero, you end up with zero.

0

Step Five - How much Bill needs in 15 years to live comfortable for the next 20. He needs the original \$488,277.

$$488,277 - 0 = 488,277$$

Step Six - How much does Bill need to set aside during his second career of 15 years? Answer \$341.79 per month.

If he saves the \$4,920 a year or the \$410 a month, from his second career job, he more then mets his goal.

$$488,277 \times .0007 = 341.79$$

Tom or Bill could also use the steps described above to advise young officers about college cost planning or retirement. For example, Bill could advise a younger officer about retirement planning. He could demonstrate that a captain with 5 years service could have enough money to produce 50% of his retirement income by investing \$118 a month, only a 3.9% saving rate. He could add a college fund of \$186 a month and still have a saving rate of only 10%. By the way, the college fund would grow to \$186,000 in 15 years.

If you do not want to go through these calculations, which I prefer, you can use the following table to estimate the percent of income you would have to save in order to replace from 40 to 100 % of your current income. 4

INCOME SAVED %	SAVING TO RETIREMENT			
	Amount of income to be replaced			
	100%	60%	50%	40%
Years of Saving Required				
7	38	29	26	23
8	36	27	24	21
10	32	24	21	17
15	25	17	15	11
20	21	13	11	8
25	17	10	8	5
30	15	8	5	3

Note this table assumes a 10% return on investment, a 3% inflation rate and a 4% annual income increase.

Using this table Bill would have to save 30% of his income for 15 years to replace 100% of his O-6 pay. This works out to be \$1,763 per month.

$$\text{Pay} = \$70,548 \times 30\% = \$21,164 \text{ per year or } \$1,763 \text{ per month.}$$

I would suggest using the first method rather than the second because it more accurately reflects the past inflationary history and the rate of Congressional pay raises.

Section Two

MEANS

You can now feel very proud of yourself. You have taken the very difficult first step in financial planning - goal setting. You have defined the two largest needs most of us have in life and have set your target. Normally the next step in military strategy would be WAYS or courses of action. However, before we examine the HOW of the problem we need to understand the resources available or the MEANS. All of the following investment vehicles will be used, in the Ways section, to accomplish our ENDS. The following definitions of commonly used investment terms provide a starting point.

Definitions

MARKET - That area of the economy that we put our money into, eg., real estate, bonds, common stocks, mutual funds, money funds, gold and silver, coins, and stamps. Certain of these have more utility for the military investor than others. You should exempt those purchases that are not investments like life insurance, most automobiles, jewelry, boats etc.

INVESTMENT - That money we put into any market in order for it to grow enough to provide the desired amount at the desired time. We do not plan on receiving any more than the average market return. Anything more or less than the market return will be looked upon as icing on the cake or as an indication that our investment vehicle needs to be changed.

SPECULATION - That money we put into the market that we expect to grow at a rate beyond that expected of an average market. For example, the purchase of stock options or shares of newly issued small companies are normally considered highly speculative.

MUTUAL FUND - A company that makes investments usually in securities(stocks, bonds, and the like). The company is governed by the rules set down in the company's prospectus.

OPEN END MUTUAL FUND - A fund that can issue more shares as the investors contribute additional money. The fund's value is based on the current value of all the funds assets or net asset value, NAV.

CLOSED END MUTUAL FUND - A fund that sells common stock in itself and holds shares of various companies as assets. These shares are traded on stock exchanges.

LOADED MUTUAL FUND - An open ended fund that charges a sales charge to purchase the fund. This charge could run as high as 50% to as low as 3%. Note, it is very important to understand that this LOAD does not go to the fund managers but to the sales organization. Most sources of fund information do not subtract the load prior to calculating the results. To get a true performance picture you must "charge" yourself the load. The load is the difference between the offer price and the NAV listed in most major newspapers. There is little or no correlation between the performance of a loaded fund and a no load one. See page 26, Loads and other Fees, for more information on the true cost of loads.

NO-LOAD FUND - A fund that has no charge to buy or sell the fund. These are generally sold through the mail. I will provide you information on how to buy these in the WAYS section. See additional information in the Loads and Fees section.

BONDS - Any debt instrument issued by a corporation, local, state or federal government. Certain Mutual Funds invest in bonds both taxable and tax free. All bonds pay interest to the holder on a regular schedule. Normally, they pay semi-annually. Some Mutual Bond funds may pay monthly, but because their securities rise and fall with the market, their value is whatever their assets equal that day. Do not confuse the stated yield with the amount the bond fund may state as its return as this return includes any capital gains the fund may have earned.

ZERO COUPON BONDS - A special kind of bond that does not pay any interest during its life but returns all the interest and principle at the maturity date. Government saving bonds work on this basis as do numerous commercial, local and state securities. These securities can be either taxable or tax free. They can be an excellent way to fund college or retirement since they have a known maturity date and utilize the tremendous power of compounding.

Most mutual fund dealers classify their funds into categories according to their investment strategies or objectives. The more common kinds are listed below:

CAPITAL APPRECIATION FUNDS - Also known as maximum capital gain, lo-cap, small-company growth, and aggressive growth funds. These generally have little yield and emphasize capital gains. These may be or may not be speculative depending on their long term performance over several market cycles.

GROWTH FUNDS - Also known as long-term growth. These normally invest in larger established firms and may be less volatile than the capital appreciation funds.

INCOME FUNDS - Funds geared toward paying high current income. These invest in companies that have a high dividend payout.

GROWTH AND INCOME FUND - A compromise fund that buys securities that offer both income and some capital gains potential. These funds will pay more in income than capital appreciation or growth funds but generally less than income funds. They may or may not return as much through capital gains.

BALANCED FUNDS - Funds that have a defined mix of securities governed by the rules set forth in their prospectus. They may have a mix of 25% of stocks, 25% bonds, 25% gold and 25% real estate.

SECTOR FUNDS - Funds that invest in selected areas of the market e.g. health care, leisure. These are generally the most speculative of all funds.

MONEY MARKET FUNDS - Funds that invest in very liquid short term securities, e.g., treasury bills, commercial paper and certificates of deposit. These funds generally have a net asset value, NAV, of \$1.00 and may allow the investor to write checks

or even withdraw money through a debit card, i.e., a card that looks and works like a credit card expect that your charge is automatically deducted from the holder's bank balance. These funds may invest in only taxable securities or in non-taxable securities. The yield from these funds reflect their investment philosophy: taxable versus non taxable, short versus long maturity and government versus commercial paper. Note, these funds are not guaranteed by the US government unless they invest only in government securities.

INTERNATIONAL FUNDS - Funds that invest in foreign markets. These may invest only in a particular region, e.g., Japan or in an area, e.g., Europe or the Pacific Basin.

GLOBAL FUNDS - Funds that invest in both the U.S. market and foreign markets.

GOVERNMENT BONDS, BILLS AND NOTES - The U.S. government issues three kinds of debt securities. Treasury Bills are issued in denominations of \$10,000 for periods of three months, six months and one year. Treasury Notes are really the same as Bonds but the maturity of Notes is one to ten years and that of Bonds is generally longer than ten years. These are the most secure of all investments since they are backed up by the U.S. government. Some recent tax law changes make certain bonds, like the new EE bond, interesting for college tuition. I'll talk more about this in the next section. Table 2 gives an overview of the preceding fund types. 5

Table Two

FUND TYPE	OBJECTIVE	INVESTS IN
Aggressive Growth	Capital appreciation	Growth stocks may be new and emerging companies
Balanced	Varies, divide holdings	Stocks, Bonds, Precious metals
Growth	Capital appreciation	Stocks of large companies
Income	Highest current income	Income producing stocks and bonds
Money Market	Liquidity and accessibility	Short term debt

My principles of investing place little weight on the type of fund or even on its stated objectives. I have listed these because you will often see these categories in publications. As you will see when we take a look at how to find the right funds the real concern is how the fund did in both up and down markets over various spans of time. Talk is cheap and money dear.

In determining what investment tool we want to use, it is useful to know the characteristics of each one. Table 3 summarizes some of these characteristics.⁶

Table Three

INSTRUMENT TAXABLE	INVESTMENT	POTENTIAL	LIQUIDITY
	RISK	REWARD	
Banks Savings yes	medium	very low	very high
Money market yes	low	low	very high
Corporate yes bonds	medium	medium	medium
Government saving yes bonds normally	very low	low to medium	varies
Mutual Funds-Bonds yes	medium	medium	high
Mutual Funds-Money market yes	low	medium	high
Mutual-Stocks yes	medium to high	medium to high	high
Mutual-Tax Exempt no	medium	medium	high
U.S. Treasury Bills yes	low	medium	high

Aft reviewing the taole above I strongly feel that the very best investment a military officer can make is mutual funds. Contained below is the information you need to start investing in mutual funds.

Mutual Funds

I believe that mutual funds are the best investment for military members. They offer enough diversity to achieve safety and they can be inexpensive to buy provide no or low load funds are bought. They provide professional management which watches the market for us and they are liquid, i.e., easy to sell. They offer the opportunity to buy shares in fairly small quantities on a regular basis thus providing an opportunity to dollar average our investment. Before we go on to the WAYS section we need to learn a little more about the vocabulary of Mutual Funds.

LOADS and other FEES

All funds operate to make money for their owners. You must pay someone to manage your money, and the way funds make money is to charge us to buy the fund, to sell the fund and to invest the money. A LOADED fund is any fund that charges a fee to buy or sell. The most common fee is a front end load of 8.5%. This is commonly called a sales charge and goes to the sales organization of the firm. Your salesman receives a portion of the load as a commission. The fund may have a "back -end load" which means that it may cost you up to 6.5% to sell your shares within some period of time, say three to five years.

Finally the fund may have a 12b-1 fee which is an amount that a fund takes from its assets-and thus from you-to pay for distribution and marketing costs. This is usually .25% to 1.25% and may be called a "hidden load".⁷

To give you an idea of the cost of these loads, compare a fund that charges an 8.5% load with a fund that charges 0%, a no load fund. Assume you invest \$10,000 in each and both show a gain of 10% at the end of ten years. The no-load fund will be worth \$2,201 more than the one with the load. The effect is even greater if you contribute monthly or dollar average. For example, if you invest \$200.00 a month with a 10% annual appreciation after 10 years, you would have \$40,000 in a no-load. The same \$200 a month invested in a 8.5% loaded fund would return \$36,600 at the end of ten years-a difference of \$3,400. Clearly then, where performance is similar, no loads and to a lesser extent low load funds are a better investment than those with a standard 8.5% front end load.

Redemption fees are not so important. They normally are only charged on investments redeemed within a certain time period which varies depending on the fund. Some funds charge them only on redemptions within 60 days of purchase, while in other funds the period can go up to three years. However, even if they stay in effect for the life of the investment, the cost is generally low. Still, check each fund and be sure you understand how much it may cost you to get out.

The fairly new 12b-1 plan was authorized by the Securities

and Exchange Commission in 1980 to help the funds by allowing them to use these fees to pay for marketing and distribution costs. Like the back end loads, these are not terribly important but they can add up. For example, after 34 years, a fund that has a 12b-1 plan with a .25% fee would reduce your profits as much as would an 8.5% load. Some of these fees run as high as 1.25% which would be equal to an 8.25% load after only seven years. As a matter of interest, the salesmen who sell these funds receive "trail fees" as long as you own the funds. Thus, they might not be eager to have you move into another fund. 8

Total Return

TOTAL RETURN is the best tool to evaluate a fund. Total Return is a synonym for total profit or loss. Total Return includes everything -dividends, interest, capital gains, and capital losses. Most publications like FORBES , MONEY or CHANGING TIMES will list the funds total return over a time period. These are normally 6 and 12 months and in the better publications 3 ,5 and 10 year periods. CAUTION: These returns do not generally include the load you may have paid for the fund when you bought it. Only FORBES, in its Honor Roll Hypothetical Investment Results, takes the effects of the loads into account, and even here, the inclusion of taxes obscures the cost of the load. The other major item to remember is that almost all the publications assume you have reinvested all dividends and capital gains in the form of shares.

Here is a formula to calculate your fund's total return during the year assuming you reinvest your distributions:

(Yearend # of shares times yearend net asset values, NAV) minus (# of shares you owned at beginning of the year times beginning NAV) times 100 divided by (beginning # of shares times beginning NAV) 9

For example, a fund's NAV at the end of one year was 40. At the end of the next year the NAV was 42. During the intervening months, the fund made distributions of \$1.00 in dividends per share and \$5.00 in capital gains. These distributions were invested when the NAV was \$41 which bought .146 shares (1.0 plus 5.0 divided by the NAV of 41, 6/41)

Total return is:

$$(1.146 \times 42) - (1 \times 40) \times 100 / (1 \times 40) = 20.33\% \text{ TOTAL RETURN}$$

For a loaded fund the example works out like this. The \$1 in dividends and the \$5 in capital gains would buy .146 at NAV in a no load but only .13 shares in a 8.5% loaded fund. $6/(41 + (41 \times .085)) = 6/44.49 = .13$)

Using this figure the total return is $(1.13)(42) - (1 \times 40) \times 100 / (1 \times 40) = 18.65\% \text{ (TOTAL RETURN)}$

YIELD

Yield is all the income, dividends, and interest that a fund has gained from its holdings divided by its NAV. This figure is not as interesting as the Total Return figure. Only in a bond should we worry about yield and then it is the PRIMARY item.

Getting Started

HOW TO BUY - If you want to buy a loaded fund or a no load fund you should ask your financial advisor or the fund management to provide a prospectus. This document describes the fund, tells you its objectives, its cost, the minimum initial investment, redemption procedures, and any special features. These may include telephonic redemptions, family fund procedures, and a record of performance. Once you own a fund you will be sent yearly statements and updates to the prospectus. Appendix two provides you a list of selected phone numbers to call if you want a prospectus. Note, some funds are not registered in all states, so you may not be able to buy them.

SIZE - I cannot find any good correlation between size and performance. It is commonly thought that the larger the fund the less it can move in the market and thus the lower the performance. All I can say is that there are some very good funds that are very large.

TIMING or WHEN TO BUY - I don't think timing matters greatly except that you should not buy just before a dividend is declared. If you buy just before the dividend is declared, you must pay taxes on the whole capital gain even though you have not been in the fund long enough to profit by it. Most funds declare dividends in December, but check the prospectus for the fund you are considering.

Offensive and Defensive Funds

Now I will define what I call "offensive and defensive" funds. These definitions and categories are mine. You will not find funds listed this way anywhere else. These categories are the basis of the Principles of Mutual Investing that follow in the WAYS section.

DEFENSIVE - Any fund that receives an A rating or higher in Forbes magazine for down markets. Forbes rates funds over the last three up markets and the last three down markets. The top performing 5% get an A+ the next 15% an A, the next 25% a B, the next 25% a C, the next 25% a D, and the final 5% an F.

OFFENSIVE - Any fund that has achieved a A rating or higher in the Forbes magazine for up markets.

This concludes the MEANS section on Mutual Funds. I feel strongly that mutual funds represent the very best way to stay ahead of inflation and make your money work for you. This is based on my review of numerous investment vehicles. The frequent moves, long hours, and separation from the general business environment make mutual funds one of the best ways for a military officer to achieve financial security. Stocks have out performed all other forms of investment over the last 20 years. Here is a brief history on how four investment vehicles have faired during various economic positions.¹⁰

	Stocks	Bonds	T Bills	Housing
Deflation	-3.3	5.2	4.8	-.4
Stability	20.8	4.9	2.7	4
Disinflation & moderate inflation	20.2	22	9.6	5.3
Rapid inflation	12.2	3.1	4.7	12.1

As you can see from the chart above, the stock market has done the best over the widest range of economic conditions. In addition to its performance over varied economic conditions, the stock market has returned 10% annual return over the last 63 years, from 1926 to 1988, and 15.4% over the last 5 years.

Long-Term Treasury Bonds have returned 4.4% over the 63 year period and 15% over the last 5 years, while Treasury Bills have returned 3.5% over the 63 year periods and only 7.1% over the last five years. Therefore, in spite of the recent violent market swings, the stock market provides us one of the very few places to make money over the long term. 11

Further, studies have shown that the risk of losing money in the stock market declines rapidly over time. For example, a basket of stocks that tracks the S&P 500 has a 3 to 4 % chance of losing money over a 10 year period compared to 15% risk over a three year period and 30% over a one year period. Over the long term, more than ten years, the stock market is one of the safest ways to invest. Remember, however, the stock market is the best place only if you have time to ride out the cycles. The average down cycle of the market is 24 months so we must consider when we will need our money for each END. 12

You may wonder why I am not considering real estate. I know some officers who have made a lot of money on houses and land. However, the average officer moves every 3 years and the different real estate markets make it hard to be a consistent winner. Also, I have tried to find markets in which our investments are fairly liquid. For those of you that have a

solid investment portfolio of stocks and bonds, real estate is an excellent addition. I have also not addressed collectibles such as stamps and coins etc. These require more time and are generally less liquid.

Finally, why do I suggest mutual funds rather than common stocks? The first reason is time. We are professionals who spend the majority of our hours thinking about and working in the Army and generally have little enough time for our families. We need a tool that does not require an excessive time investment. Secondly, we need diversity. Third, we need professional help in timing since we cannot spend the hours picking the very best stocks and buying and selling them at the right moment. In fact, you will see that I suggest a buy and hold philosophy of investing thus leaving the market timing problems to the fund's portfolio managers. Finally, there is the question of cost. If you buy common stocks from a stock broker, even a discount one, you will pay a commission upon both buying and selling. The mutual funds I will suggest should not cost you anything to buy or sell. The savings in commissions, whether in the form of stock commissions or loads on funds, can add to our total earnings, especially if a monthly investment plan is used to acquire the mutual fund.

BONDS

If Mutual Funds make up the risk portion of our investment package, bonds will make up the more predictable portion. Bonds should be used whenever a steady source of predictable income or a set amount of money at a particular time in the future is needed. Certain bonds, such as municipals, shelter income from federal, state and local taxes. We will briefly discuss bonds and then examine their use in funding a college education and retirement.

Bonds are sold through brokers, except in the case of U.S. Treasury bills, notes, and bonds which are purchased through the local Federal Reserve Bank. They are priced in denominations of \$1000 to \$10,000 per bond and are generally bought in units of five or more bonds. The bonds pay interest to you directly either once a year or twice a year. If you buy through a broker, you can have the interest paid to your account in your broker's name. This is useful since you can arrange for the money to go directly into a money market account where it will draw interest.

Bonds are issued by corporations, the federal government and its agencies, and states and local governments. You may even buy foreign bonds directly or through an agency of the federal government. I cannot go into all the different types of bonds, but there are numerous books which can give you a complete understanding of this important area of investment. I should add now that bonds are very good for other things in addition to college expenses and retirement. For example, they may be used

to increase current income, save capital in times of deflation, and provide additional diversity for your overall investment portfolio.¹³

In order to invest in bonds you need to understand some terms common to them.

Definitions

PAR VALUE - The face value of the bond, usually \$1000.

CALL - Some bonds are sold with the issuer having the right to retire the bond early. This is normally done when the prevailing interest rates have fallen. The damage to you if a bond is called is that you must reinvest your money and the market may or may not pay the same rate of return as when you purchased the bond. You MUST watch for this when purchasing a zero coupon bond for educational purposes since you bought the zero with definite plans on how much money you needed at a specific time in the future. If you are forced to reinvest at a lower rate, you may not have the amount you planned on to meet your goal.

YIELD to MATURITY - The calculated rate that the bond will return if held to maturity. If you have not purchased the bond at par, the yield to maturity for you will not be the stated rate. You MUST understand this figure so you can calculate your return. Your broker should be able to give you these figures, and many daily newspapers also publish these figures. If your bond is callable you should also know the yield to call figure.

COMMERCIAL BONDS - Bonds issued by commercial firms. These bonds are backed by either future earnings or by assets, e.g., airplanes, plant etc. These are rated by either Moodys or Standard and Poors, S&P. You should buy only bonds rated Aaa, Aa or A by Moodys and AAA, AA, A by S&P. Commercial bonds usually pay the highest interest rates.

COMMERCIAL ZERO-BONDS - Same as above except these bonds pay all interest and principle when the bond matures, comes due for payment, or when it is called. Note: All zero bonds allow the investor to automatically reinvest the interest payments at the original interest rate. With all other bonds you must reinvest the interest payments at whatever the current market will pay. While the latter afford you greater flexibility, it does not produce a fixed amount at the exact time you have planned to have it. You can also invest in ZERO bonds though a bond fund. These are fairly new but they work on the same principle as any mutual fund. They have all the same advantages except the tax free bond funds do not have a definite maturity time, lessening their usefulness for college planning. For example, Benham Capital Fund, a no load fund listed on the New York Stock Exchange, offers zero maturing in 1990, 1995, 2000, 2005, 2010, and 2015.

MUNICIPAL BONDS - Those bonds are issued by state or local governments backed up by earnings such as general revenue, toll receipts, or tax revenue. These are generally totally tax free.

MUNICIPAL ZERO-BONDS -The same as above except these bonds do not pay any interest until their maturity date or call date,

if called. The principle and interest are paid to you upon maturity or call.

TREASURY - These instruments include EE Saving Bonds, Bills, Notes and Bonds. They are without question the safest of all investments. These also have another advantage in that they generally cannot be called. 14

TREASURY INVESTMENT GROWTH RECEIPT, TIGR - These are a new family of zero bonds or rather "derivative zeros" since they are really derived from U.S. Treasury Bonds. TIGR are offered by the firm of Merrill Lynch, CATS, by Salomon Bros., LIONS, by Lehman Brothers, and STRIPS offered by the U.S. Treasury. These may be either callable or non callable. As with any bond, the longer the maturity the higher the rate of interest because of the greater uncertainty. 15

SERIES EE BONDS - These are slightly different from the other bonds, since they pay a sliding interest scale with a stated minimum. Held for 5 years they pay 85% of the average interest rate of 5 year Treasury notes. In addition, as of January 1990, these bonds will be treated as tax free if investment is used to pay for college education. Since EE saving bonds are rather special, let me spend a little time on them. First, as explained above, their interest rate slides and is dependent on the Treasury Bill rate. Second, they enjoy special tax benefits such as the above mentioned educational exemptions. These interest breaks apply only if you make less than \$60,000 taxable and filing a joint return or \$40,000 filing a single return. If

you earn more, but not more than \$90,000 joint or \$55,000 single, you cannot deduct the interest. However, you can buy the bonds in your children's names and perhaps qualify for the exclusion. Third, you can buy them through payroll deduction or at any commercial bank. Finally, they are the least expensive of all the zero bonds you can buy.

Bond Example

Now that you have the basics down let us see how these bonds can work for us. First, let us examine a range of \$5000 zero coupon investments all maturing in 10 years.

Investment	Price	Approximate Interest
CD	2,508	7.35%
EE	2,500	depends on time held and Tres Bills
CATS	1,625	10.00%
Commercial	1,600	10.60%

As you can see, the more secure the bond the lower the interest rate. It also should be noted that the Cats and Commercial Bonds will cost you a commission fee, while the first two need not. However, the higher interest rates paid by the CATS and Commercial Bond may well justify the slight increase in risk and commission.

There are also two disadvantages to both CDs and to EE bonds. Neither are very liquid. The EE bonds cannot be redeemed for at least 6 months and redeeming the CD before it matures could cost you an interest penalty. The other investments may be traded on the open market if there is interest in them. For

that reason, I suggest buying only the well known CATS or similar kinds of zeros. The commercial ones are acceptable if they are highly rated and you can find their prices quoted daily in a good size newspaper.

Finally, there is a potential problem with these zero bonds. Without going into too much detail, the current tax laws require that you pay tax each year on the interest paid on these bonds even though you don't receive any money until the bond matures.¹⁶ One way to reduce this tax bite is to buy the bonds in the name of your children. Under the Uniformed Gift to Minor Act (UGMA) the taxes work in this way: If your children are under 14 years of age, they are also taxed at the parent's highest rate after the first \$500 income. If your children are over 14, the first \$500 is tax free and the remainder is taxed at a 28% rate until the child's income reaches the 33% cutoff point.¹⁷

While on the subject of taxes, let us spend a couple of minutes reviewing tax free versus taxable bonds. As you have moved up the promotion ladder, you may not have realized that your tax bite has steadily grown. The following equation and the table provide you a comparison of yield on both taxable and non-taxable investments. Be sure and ask your broker or look up in a current newspaper the "spread", or differences in yield, on taxable versus non taxable bonds. This spread changes frequently so I cannot give you a hard and fast rule. However, over the past two years, I have found several situations where

tax free bonds paid, after considering the tax bracket, more interest with less risk then taxable bonds.

To calculate if you should buy tax free bonds of any type use either this simple formula or the table below.

tax free rate / 100% - tax bracket = taxable yield

For example a 7% tax free investment would be equivalent to a 10.4% taxable investment if you were in the 33% tax bracket.
(7% tax free / 100% - 33 % bracket = 10.4%)

Table Four lists the equivalent tax free rates to taxable rates in various tax brackets.

Table Four
Tax-Exempt/Taxable
Yield Equivalents 18

Taxable Income Single Return	\$0- \$17850	17,851- 43,150 or over 100,480	43,151 100,480
Joint Return	\$ 0- \$29,751	29,751- 71,900 or over 171,090	71,901 171,090
Tax Bracket		15%	28%
Tax-Exempt Yield % equates to in the 15% bracket		Taxable Yield Equivalents % equates to in the 28% bracket in the 33% bracket	
5.0 5.88		6.94 7.46	
5.5 6.47		7.64 8.21	
6.0 7.06		8.33 8.96	
6.5 7.65		9.03 9.70	
7.0 8.24		9.72 10.45	
7.5 8.82		10.42 11.19	
8.0 9.41		11.11 11.94	
8.5 10.00		11.81 12.69	
9.0 10.59		12.50 13.43	
9.5 11.18		13.19 14.18	
10.00 11.76		13.89 14.93	
10.50 12.35		14.58 15.67	
11.00 12.94		15.28 16.42	

Section Three

WAYS

Stock Mutuals

Now that you understand the MEANS, or tools of investing in stock mutuals and bonds, let's begin talking about how to do it.

There are several ways you can invest in either mutual funds or bonds depending on how much time and money you have. You can buy any loaded fund or no load by looking up the address of the fund in any one of a number of publications available in most Post Libraries. The one I like is Wiesenberger. This is normally found in the reference section and has an excellent section on what mutual funds are, how to measure their performance and all their charges. It also provides a look at the objectives of the fund and the recent portfolio mix. If the library has kept up their subscription, it will list the most recent performance over various periods. It is the single best reference for mutual funds.

Several national magazines review mutual funds annually. The best, in my opinion, is Forbes. The first Forbes issue in September reviews all the funds giving critical performance data and the address or toll free number to call for a prospectus. Review the funds, use the principles outlined in the MEANS section, make your choices, then write or call for the funds prospectus. Remember to check on the minimum required to invest, usually \$500 or \$1000, any loads or special charges and what you need to do to get your money out. Once you have reviewed all the information, you can start investing. Keep in mind the

principles on how and when to review your investments.

If you do not want to deal directly with the fund, you may be able to buy your fund through a broker. This will generally cost you a commission but you can deal by phone, and if you have other investments, you can receive a consolidated financial report. Charles Schwab, a discount stock broker, offers over 200 mutual funds for sale. If you want to go this way, just call your local Charles Schwab's outlet. This service will cost you from \$12 to \$38 and from .8% to .2% of the amount invested.

The next decision you have to make is whether you invest monthly or all at once. If you have a large amount, you may still wish to break the investment down into smaller parts and invest over time. This method is commonly called "dollar cost averaging". Even if you don't have a large amount to start, dollar cost averaging is a good way to ensure regular investment and over the long term should provide a fair price. In an up and down market, dollar cost averaging will give you the most for your money. Of course, if you could time your investment to buy the fund at its low, that would be the very best strategy. But, as the street saying goes, no one rings a bell at the top or bottom of the market. My recommendation is that if you have a large sum, invest it over a period of a year, say at the quarters, and if you have a small amount, just invest every month. Many funds have a program to allow you to invest each month by mail. If you agree that the U.S. economy is basically sound and the overall trend is up, then the exact time of the buy is not too important. Remember you should NOT buy any fund

before it declares its annual or semi annual payout. This payout will be the amount of money the fund has earned from dividends and interest on stocks and bonds held in their portfolio added to the amount of money they have earned from gains less losses on stocks and bonds they have traded throughout the year. If you buy just prior to this payout, then you will have to pay tax on this money. Since the value of each share will decrease by the amount of payout, you will have been taxed on money you did not earn. The easy fix is to buy just after the annual payout. The most important point is that the investment is made and your money is put to work.

If you are interested in market timing, I recommend you read "The Donoghue Strategies" by William E. Donoghue. There are over 25 firms that provide information on funds, timing of funds, etc. You can get a good list by calling the local Charles Schwab's outlet and asking for their Mutual Fund Facts. It lists some 25 advisors and a short description of what they offer. I would add that Forbes has done a study on most of these and concluded that, over time, a buy and hold strategy works as well as following the advice of any of these firms. Market timing is a form of speculation. This is not to say that you should never leave the market, but remember, your goal is to earn 15% or better on your funds. Just remember that the average length of a bear markets is 2 years, and you have to get back in at the right time. My advice is to stay fully invested, and let the fund managers move your money in and out of the stocks. That is what you are paying them for.

Here are my Principles for stock mutual investing.

Principles of Stock Mutual Investing

1. Invest early and consistently. The sooner you start the sooner the effects of time and compounding can work for you.
2. Set your goal at a 15% return from your funds.
3. Invest half of your mutual fund investment in defensive funds and half in offensive funds. Even if a fund is rated A in each category, you must invest in at least two funds. If you have a large amount, you may wish to invest in four funds, two of each. Your funds must be rated "A" to "A+" for the up or down markets. Therefore, you should have either one or two funds rated at least "A" for up markets in your "offensive portfolio" and one or two funds rated at least "A" in down markets for your "defensive portfolio". If possible, the fund should be rated a B in the opposite market but no lower than a C.
4. Review your funds performance once a year only! You may check on it during the year but only review it once. More than this may well result in churning, excessive buying and selling. During this annual review, you should sell your fund only if it has fallen to a "C" rating for two years running. Any rating below a "C" should be sold in one year. For instance, only sell if, your "offensive" fund falls to a "C" as measured in up markets or your defensive fund falls to a "C" in down markets two years running. If your fund does not bounce back to at least a B from the C, sell and replace it with an A rated fund. (I have kept over 90% of my funds for 15 years so once you pick

well you should not need to sell often.) (optional) Move your money from your "offensive" portfolio to money funds if the interest rates of money funds are paying above 12%. Since our goal is 15% and most "offensive" funds do poorly in a period of high interest rates, this is a prudent move. If you follow this principle, however, you MUST move back into your "offensive" funds after the rate falls below 12%.

5. Leave at least 50% of your portfolio in mutual funds at all times. Market timing is very risky and no one rings a bell at the top or the bottom of the market, so you must ride though the poor times to benefit from the better ones.

The Test

Let us see if these investment principles work. Referring to the charts and tables in the ENDS section, let us see if you can earn enough money to put your children through school.

The test is to earn in 10 or less years the necessary capital to put the children through college. I have assumed that you do not have a large amount of principle to put down. The first step is to find either two or four no load mutual growth funds that meet the criteria set forth in the Principles for Investing in Mutual Funds. Next, evenly divide your money between a defensive fund and an offensive fund. (See the list in appendix one.) When your first child is two years away from the first year in college, you need to move whatever amount of money necessary to pay for the first year of college from the mutual stock fund to a money market fund. Bear markets, down ones, have historically lasted an average of two years. Therefore, if

you move your money out of the stock funds and into money funds two years early, you will have the money necessary to meet college expenses.

A more aggressive move is to remove only 50% of your required money two years out and then 50% one year out. These are then staggered as each year goes by and multiplied by the number of children in school.

Lets examine such a portfolio based on past fund performance. I have assumed reinvestment of all dividends and interest. All funds are no load. Note, the lump sums and monthly investments do not include your yearly taxes or loads. You must pay for these out of current income. I have assumed the child is 11 years old entering college in 7 years. College costs are 29,238 at a public college and 74,527 at a private one. From table one, here are four funds that would have met our requirements.

Fund	Period 1982 to 1988 average return	Monthly investment required	Money available for college
<u>Linder</u>	17.7	198	31,132
Nicholas	17.5	206	29,431
<u>20th Century Select</u>	18.3	208	30,301
Evergreen	15.9	202	27,358

As you can see, if you started at 11 years old, you would have hit the mark with these mutual funds. But let's be fair and

go back to 1981, and see if the selection method would have found and retained these funds.

Forbes ratings for these funds were:

	1981		Pick	1989	
	UP	Down		Down	D A+
Linder	B	A			
Nicholas	A	C		B	A
20th Century Select	A	A	Up	A	C
Evergreen	A	B		A	C

As you can see, these have been good all weather funds for these seven years. If you commit yourself to investing in these kinds of funds, the odds are very good that you will return above 15%.

Bonds

Besides investing in stock mutual, you will want to consider bonds. I recommend that you keep 60% in stock mutual and 25 to 30% in bonds with your remaining capital in money funds or CD's. These can be in either single issues, open ended bond funds or unit trusts.

Bonds represent a conservative portion of your investments. They also provide an interest sensitive portion that will move up during declining interest rate periods and down during rising interest rate periods. Bonds can either provide regular income, normally paid semiannually, or a set amount to be received in the future.

To invest in bonds, you will normally need to use a broker unless you buy treasury bills, notes or bonds or EE saving bonds. You can buy all of these directly from the government by sending in a bid for the buy or by choosing the option of buying at the average price for that day. You can buy these from the closest Federal Reserve Bank. For us in Carlisle, that would be Baltimore or Philadelphia. The minimum amount is \$10,000.00. Another and somewhat easier way is to have a broker buy them for you at a small commission. The commission should run from \$50 to \$100 for a \$10,000.00 purchase.

To buy commercial bonds or municipal bonds, you must go to a broker. If you already have a broker, then ask his commission rates. These should run from \$5 to \$10 a bond. Sometimes you will not be charged any direct commission but will pay a markup from the asked price. In either case, the commission or charge

is not a major expense. I recommend a discount broker if you know bonds. If not, go with a bond specialist. One that will send you enough information to get started is Gabriele, Hueglin & Cashman out of New York. They have a toll free number: 800-223-2610. Although bonds are generally less risky than stocks they may be harder to understand. They have many more features such as insurability, call, yield to call, yield to maturity, and liquidity that must be considered. There may also be a problem in buying enough bonds to achieve diversity and thus safety. I strongly suggest that you ask about prerefunding, insurability, rating, call and maturity yields. A good broker will take the time to explain all your options and risks.

Bond funds provide another way to invest in bonds. There are two types of bond funds, open ended funds and unit trusts. Like stock mutual funds, both types of bond funds buy large amounts of bonds and thus provide safety through diversity.

Open end bond funds can be taxable or non-taxable and will quote both a yield and return. They are suitable for any portfolio that requires steady income, but both the income and principle are subject to market fluctuations. They provide inflation protection but not rock steady income or principle return. Because of this, they do not fit the bill for college or long term retirement planning as readily as do bonds and unit trusts which have a known maturity date.

The unit trust fund is like a closed end stock mutual fund. It buys a number of bond issues and then puts them in an

unmanaged unit trust which issues checks either monthly, semi-annually or annually. These normally have fairly low management costs and can be a good way to gain a position in bonds. You can buy these trusts through most brokers. They will return a known amount each period, and this payout will not fluctuate with interest rates. However, be aware that, if interest rates go up, you are locked into the rate at which you bought. These trusts lend themselves to both college and retirement planning since they are very predictable in terms of principle return. You can find unit trusts that buy only tax free bonds and also those that invest in only taxable and non taxable zero bonds.

Zero bonds offer a way to invest a small amount of money now with a large principle return at a known future date. Zero bonds also reinvest the interest at the original agreed on rate.

The major differences between these three options are the amount of money needed to invest initially and the degree of risk. Single bond issues are the riskiest choice while unit trusts are the safest. The open ended mutual bond fund option requires the smallest initial investment although the unit trust is generally available for as little as \$1000.00. All of these fund types have advantages and should be considered in developing a diverse portfolio.

Bonds, particularly zero coupon bonds, can be used to fund both education and retirement. For example, the table below lists the current costs of \$40,000 worth of zeros maturing at the indicated times. A zero bond can return from 10% on the commercial market to around 7% in U.S. Treasury instruments.

If you do not have the capital necessary to purchase these, you can put your money into one of these zero bond funds or buy EE saving bonds through payroll deduction.

Here is a sample zero bond fund strategy. The zero rates are as of November 1989. Interest rates vary as the time to maturity increases.

College Example				Retirement Example		
Current age of child	Age college starts	Initial cost of bond	Maturity value bond	Age purchased	Retirement age	
5yr	2002	3626	10,000	50	63	
	03	3401	"		64	
	04	3117	"		65	
	05	2905	"		66	
	total	13049	40,000			
6yr	2001	3926	10,000	51	62	
	02	3626	"		63	
	03	3401	"		64	
	04	3117	"		65	
		14070	40,000			
7yr	2000	4303	10,000	52	61	
	01	3926	"		62	
	02	3626			63	
	03	3401			64	
		15256	40,000			
8yr	1999	4622	10,000	53	60	
	2000	4303	"		61	
	01	3926			62	
	02	3626			63	
		16477	40,000			
9yr	1998	5016	10,000	54	59	
	99	4622	"		60	
	2000	4303			61	
	01	3926			62	
		17867	40,000			
10yr	1997	5427	10,000			
	98	5016				
	99	4622				
	2000	4303				
		19368	40,000			

Annual Review

Principle five states that you should review the performance of your mutual fund once a year. This will work for the mutual funds, but you also need to review and evaluate your total investment picture. This review will give you a snap shot of how far along you are in meeting your goal. If you are ahead of your pace, then you can reduce your invest rate or better yet, have more money then you need to meet your goal. If your investments are not doing as well, you will need to increase your savings and investment rate.

To conduct this review, calculate the current value of your investments using a current newspaper that lists all the stock and bond mutual prices. Remember, if you have loaded funds in your portfolio, then you must use the offered price rather than the bid price. Once you have evaluated your current assets, use the six step procedure to determine if you are on track. Your current investment value should be plugged into step three. Then use the remaining three steps to determine if you are saving and investing at the required rate. If the market has been down the previous year, you may find that you are behind. If you need the money within two years, you need to increase your savings rate. If, however, the goal is still over five years away, then the market will most likely correct the deficit. Remember, your investments must be returning the percentage you picked in step four, 10%, 15% or 20%. The investments I have suggested in this paper should return at least 10% and historically have returned

15 : 20% per year.

If your goal has an absolute monetary requirement, i.e., college, a conservative approach would be to take the first year or two of the requirement out of the higher risk investments like the stock mutual and move the money into either a zero bond that matures on the date you need it or bank CD's. Of course, this strategy only works if you have reached the goal. If you have not reached the goal and the time is less than two years, you can only increase your saving and investment rate.

Financial Advisors

If all this seems too complicated, you have an alternative. You can turn to a financial advisor. Financial managers come in all shapes and sizes. Some of these cater to the military, and I am sure that you have been approached by them in the past.

Following is a list of questions I suggest you ask any advisor. They come mostly from the International Association for Financial Planning, IAFP. This association publishes a Consumer Bill of Rights and a Registry of Financial Planning Practitioners. Both can be obtained by writing the IAFP at Suite 800, Two Concourse Parkway, Atlanta, Georgia 30328 or call (404) 395-1605. The registry will cost you \$2.50. In addition you can check with the National Association of Personal Financial Advisors (312-537-7722) or the Institute of Certified Financial Planners (303-751-7600). The IAFP recommends asking or checking the following details:

1. The planner's background, education and experience.
(I recommend that the planners have an MBA, and be designated as a Certified Financial Planner (CFP), or a Charter Financial Consultant (ChFC)).
2. Ask for references. Do not feel bad in calling a couple of clients to find out if they are happy with the service they have received. MOST important, find out how long the planner has been in the business. I suggest at least two years and five is better.
3. Question him on all stocks, bonds, mutual, zero, tax and non-tax investments. If he does not handle all of them, you should

realize that he probably will avoid recommending investments from which he will not receive income.

4. Is the person that you are talking to the one who will be handling your account? If not, will he be supervising the people who do?

5. Ensure that the analysis you receive is done for you and not just a general concept the planner's firm has fitted to you.

6. MOST IMPORTANT, how is the planner compensated? He can charge a fee, receive a commission on the products you buy, or a combination of both. If the planner is remunerated only through commissions, then you must understand that he will not recommend no load funds or government investments since he will not make any money from those. I recommend an advisor paid only by fee.

7. Beware of any planner who recommends any investment that sounds TOO GOOD. It probably is. If you do not understand the investment, LEAVE IT ALONE.

8. Be leery of a performance record that is too good. Some one could send out letters to 600 people saying to one half that the market will go up and to one half that it will go down and be right 50% of the time. If he continued sending letters only to those who received correct predictions, the one person left at the end would proclaim him a genius.

9. Ask to see a copy of the advisor's own financial plan.

10. Be VERY leery if he asks for discretion over your bank account. In fact, be careful if he asks for authority to move your money around without your permission.

Mistakes

In summary, here are some of the most common money mistakes made according to some of America's leading financial writers and advisors:

Malcolm Forbes - publisher and editor in chief of Forbes magazine. " Americans "too often lose it" by making poor investment decisions, by listening to poor advice and succumbing to the temptation for a higher rate of return. If an investment looks too good there is a reason its been overlooked" Sylvia Porter - syndicated columnist. Americans do not pay themselves first before the rent or other bills. Save at least 10%.

Ted Miller - editor of Changing Times. Too few people have goals. Too few recognize that different goals require different investment decisions.

Andrew Tobias - personal finance writer. Americans do not plan for their investments. They need to take control over where they are going. Many people are in such a hurry to see results they rush into speculating instead of investing. 19

Conclusion

1. Define your goals.
2. Follow through on them.
3. Maintain records of your investments for performance and taxes.
4. Keep an open mind on new investments. Study the risks but realize that money funds only began about 15 years ago. New investment opportunities do open up. You should not put all your

money in a bank passbook or a CD.

5. Diversify your investments between individual mutual funds, bonds or bond funds and money markets.

6. Ask the dumb question if the investment looks too good. Remember, you are the only person REALLY concerned over your money.

If you have decided to invest in either stock mutuals or bonds, or, better yet, both, then remember that you must be comfortable with the risk and reward trade offs. While I recommend an aggressive approach of 60 to 65% in stocks mutuals and 20 to 25% in bonds with the rest in money funds, you may choose a less aggressive approach such as 45% stock mutuals and 18% in bonds with the rest in money funds, or a conservative approach with only 30% in stocks and 15% in bonds leaving 55% in money funds. Given a projected annual return of 12% on the first, 11% on the second, and 10% on the third, the monetary returns would be \$96,463 on the first, \$80,623 on the second, and \$67,275 on the third over a 20 year period. In short, the risk is worth about \$30,000. In any case, remember the very first principle, INVEST NOW!

I hope that this paper has started you thinking about your investment program and how to modify it to met your ENDS. I have not explored all the investment options, nor have I provided "sure" fixes to any particular investment problem. Rather, I hope I have given you the tools necessary to invest. Remember, no investment is without risk be it saving in a bank or playing the horses. You can only hope to invest wisely through studying

the market you want to invest in and going about it systematically over time. It's never too late to begin. Good luck.

Appendix One

MUTUAL FUND GUILD

FUND	Forbes Rating	lyr	Performance Record			expense per 100 of fund	load	
			up market	down market	4yr Performance	6yr percentages		
<u>Fidelity Magellan</u>	A+	B	23.5		20.6	20.7	23.9	1.08 3%
Evergreen A	C	13			13.7	14.7	13.8	1.03 none
Evergreen D Total	A	14.3			11.8	14.5	16.5	1.02 none
Vanguard 500	B	C	20.3				14.3	.22 none
<u>20th Century Select</u>	A	C	15.6		16	15.3	15.6	1.00 none
<u>Tudor</u>	A+	C	15				16.3	1.14 none
<u>Selected American Shares</u>	C	A	25.7				17	1.11 none
Scudder Equity	A+	D	33.9				16.5	.89 none
<u>Safeco America</u>	C	A	14.7		16.2	18.2	16	.93 none
<u>Nicholus B</u>	A	17.3			13.9	15.5	17.3	.78 none
<u>Neuberger Berman Manhattan</u>	C	20.3			30.1		15.7	1.20 none
<u>*Mutual Shares</u>	C	A+	19.2		18.1	18.8	18.5	.67 none
<u>*Mutual Qualified</u>	C	A+	19.0		30		20.8	.67 none
<u>Loomis Sayles Capital Development</u>	A+	B	9.2		31.2		19.2	.92 none
Linder	D	A+	16.5		13.6	14.2	20.1	.92 none

Janus	C	A	37	19.4	16.8	16.7	.96	none
Ivy Growth	C	A	17.4	23.6		16.8	1.35	none
IAI Regional	A	B	16.6	33.2		14.5	.90	none
<u>*Vanguard Windor</u>	A	A	18	18.1	19.6	21	.47	none
<u>Lehman Opportunity</u>	A	B	17.8	29.6		22.5	1.23	none

* These funds are currently closed to new investors

The underlined funds meet the all my criteria for offensive or defensive funds. I would recommend a 50/50 split between offensive and defensive funds starting with the A-B if possible and moving to C. I would not sell any fund that remained at least a B in the category I bought it for. This reduces the propensity to churn your mutuals. If the fund does fall to a C, I would consider selling it and replacing it with another fund with the same objective. The rating come from the Forbes publication and the yearly calculations come from the S&P 500 Stock Guild normally found in any stock brokers office. I have picked the time intervals to check how the funds performed in both up and down markets and how consistent the gains have been.

Appendix Two

MUTUAL FUND GUILD

FUND	Telephone Number
Fidelity Magellan	800-544-6666
Evergreen	800-235-0064
Evergreen Total	800-235-0064
Vanguard 500	800-662-7447
20th Century Select	800-345-2021
Tudor	800-223-3332
Selected American Shares	800-553-5533
Scudder Equity	800-225-2470
Safeco America	800-426-6730
Nicholus	414-272-6133
Neuberger Berman Manhattan	800-877-9700
<u>Mutual Shares</u>	800-448-3863
<u>Mutual Qualified</u>	800-448-3863
Loomis Sayles Capital Development	800-343-7104
Linder	314-727-5305
Janus	800-525-3713
Ivy Growth	800-235-3322
IAI Regional	612-371-2884
<u>Vanguard Windor</u>	800-662-7447
Lehman Opportunity	212-528-2744

Appendix Three

Bond List

Taxable

Municipal

Name	Rating	Phone	Name	Rating	Phone
Axe-Houghton Tax-Free Income	A C	800-366-0444	Fidelity High Yield	B C	800-544-6666
Dreyfus	D A	800-645-6561	Safeco Mun Bond Fund	A C	800-426-6730
Benham Treasury	D A	800-227-8380			
Fidelity	A A	800-544-6666			
Northeast Investor Trust	A D	800-225-6704			
Vanguard Fixed Income	B A	800-662-7447			

ENDNOTES

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